

What we claim is:

- 1: A process for identifying bacterial colonization factors in a culture of entero-toxigenic E. coli bacteria comprising the steps of:
  - 1) suspending bacteria in an isotonic solution, followed by heating for 15 to 30 minutes at a temperature sufficient to release the colonization factors into solution,
  - 2) centrifuging the product obtained in step 1, then discarding the precipitate obtained after centrifugation while retaining the supernatant,
  - 3) adding sufficient ammonium sulfate to the supernatant obtained in step 2 to obtain a concentration of 15% to 50% saturation of ammonium sulfate until a precipitate is seen,
  - 4) centrifuging the product of step 3 containing the precipitate to pelletize the precipitate,
  - 5) dissolving the pellet obtained in step 4 in water and dialyzing to remove ammonium sulfate and other small molecules and retaining the material remaining inside the dialysis membrane,
  - 6) drying the product retained in the dialysis membrane in step 5 to obtain dried colonization factor,
  - 7) solubilizing the dried colonization factor obtained in step 6 by first dissolving in 1,1,1,3,3,3-hexafluoro-2-propanol, then adding a volatile acid in aqueous solution to provide solubilized colonization factor,
  - 8) subjecting solution containing solubilized colonization factor obtained in step 7 to mass spectrometry to determine mass, and comparing mass of proteins found therein with mass of known colonization factors.
2. A method of solubilizing colonization factor comprising the steps of
  - 1) dissolving the colonization factor in 1,1,1,3,3,3-hexafluoro-2-propanol, then

2) adding an acidified aqueous solution which has been acidified with a volatile acid to the composition obtained in step 1.

3. A composition of matter consisting essentially of at least one partially purified bacterial colonization factor solubilized in 1,1,1,3,3,3-hexafluoro-2-propanol.
4. A method of claim 2 wherein the volatile acid is acetic acid.
5. A method of claim 1 wherein, in step 1, the bacteria in isotonic solution is heated for about 20 minutes at about 65°C.
6. A method of claim 1 wherein the CF is solubilized before subjection to mass spectrometry by dissolving in 1,1,1,3,3,3-hexafluoro-2-propanol followed by addition of an acid in aqueous solution.
8. A method of claim 1 wherein, in step 8, the solution is scanned at m/z 1400 to m/z 2500.
9. A composition of matter comprising a partially purified bacterial colonization factor of an entero-toxigenic E. coli in 1,1,1,3,3,3-hexafluoro-2-propanol which does not contain a volatile acid.